

OPERATING SUMMARY

**SOUTH PEEL**  
WATER POLLUTION CONTROL SYSTEM

**MALTON**  
WATER POLLUTION CONTROL PLANT

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WATER POLLUTION CONTROL PLANT

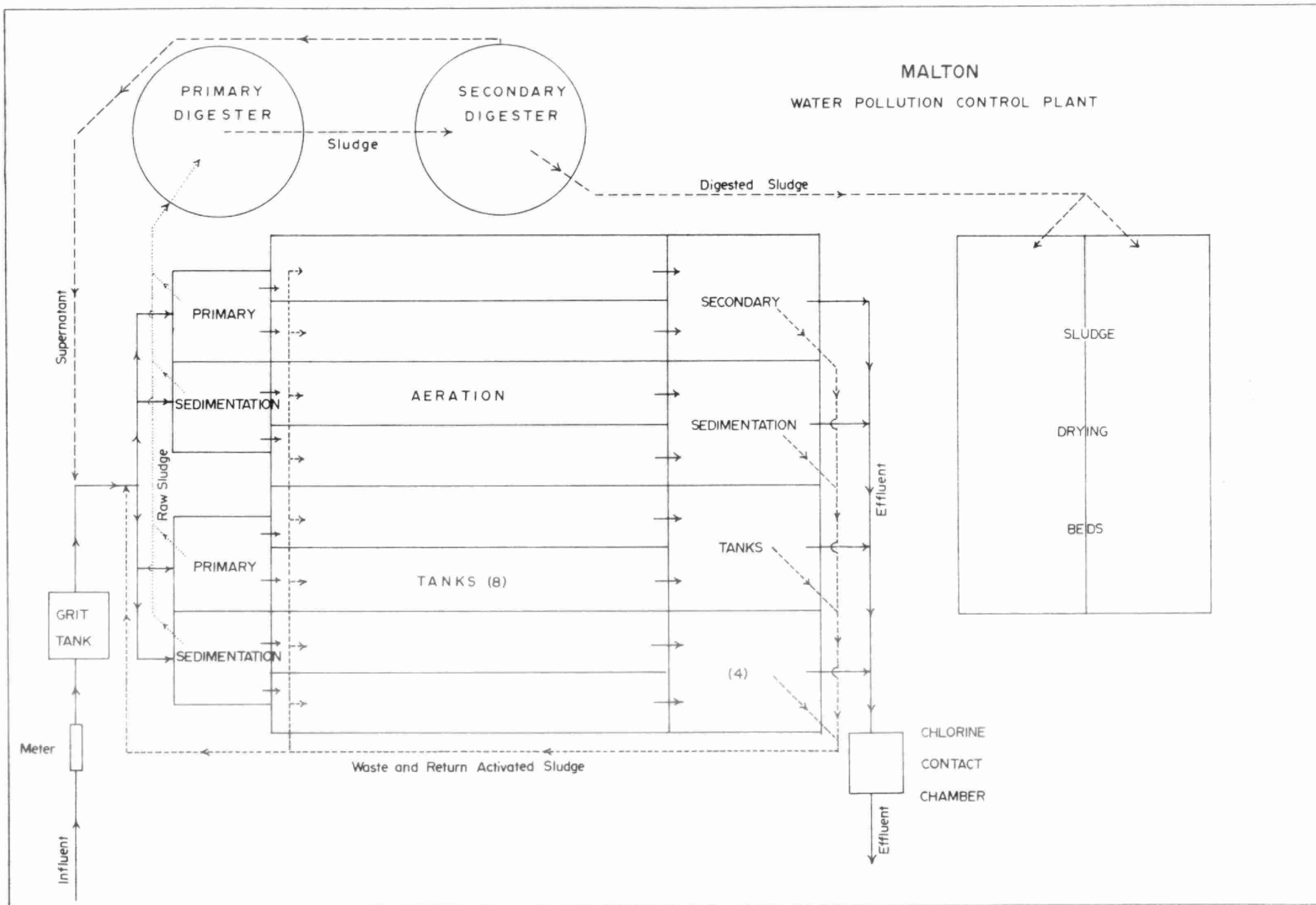
MINISTRY OF THE ENVIRONMENT

1974 ANNUAL OPERATING SUMMARY

prepared by  
Plant Performance Unit  
TECHNICAL SERVICES BRANCH  
T. Cross, Director

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## DESIGN DATA

PROJECT Malton WPCP

TREATMENT Conventional Activated  
Sludge

DESIGN FLOW 0.75 mgd

### GRIT REMOVAL:

Type: Aerated, grit removed by airlift

Size:

Volume:

Detention:

COMMINUTION: not provided

### PRIMARY SEDIMENTATION:

Size Four 16' x 16' x 10' swd (DORR SQUAREX)

Volume: 10,200 ft<sup>3</sup> (total) or 63,600 gal.

Detention: 2.04 hr. @ 0.75 M.G.

Loading: Surface 735 gpd/ft<sup>2</sup> Weir: 4080 gpd/ft.

### AERATION:

Type: Single pass, diffused air

Size: Eight 58' x 9' x 9'

Volume: 37,600 ft<sup>3</sup> or 0.234 M.G.

Detention: 7.5 hr. @ 0.75 M.G.

Air Supply

### SECONDARY SEDIMENTATION:

Size: Four 19' x 19' x 10' swd (DORR SQUAREX)

Volume: 14,400 ft<sup>3</sup> or 89,900 gal.

Detention: 2.88 hr. @ 0.75 M.G.

Loading: Surface 520 gpd/ft<sup>2</sup> Weir: 2930 gpd/ft.

### CHLORINE CONTACT CHAMBER:

Volume:

Detention:

### DIGESTION:

Type: Two stage

a) Primary

Type: DORR draft tube mixers

Size: One 40' dia. x 23' swd.

Volume: 32,000 ft.<sup>3</sup> or 0.200 M.G.

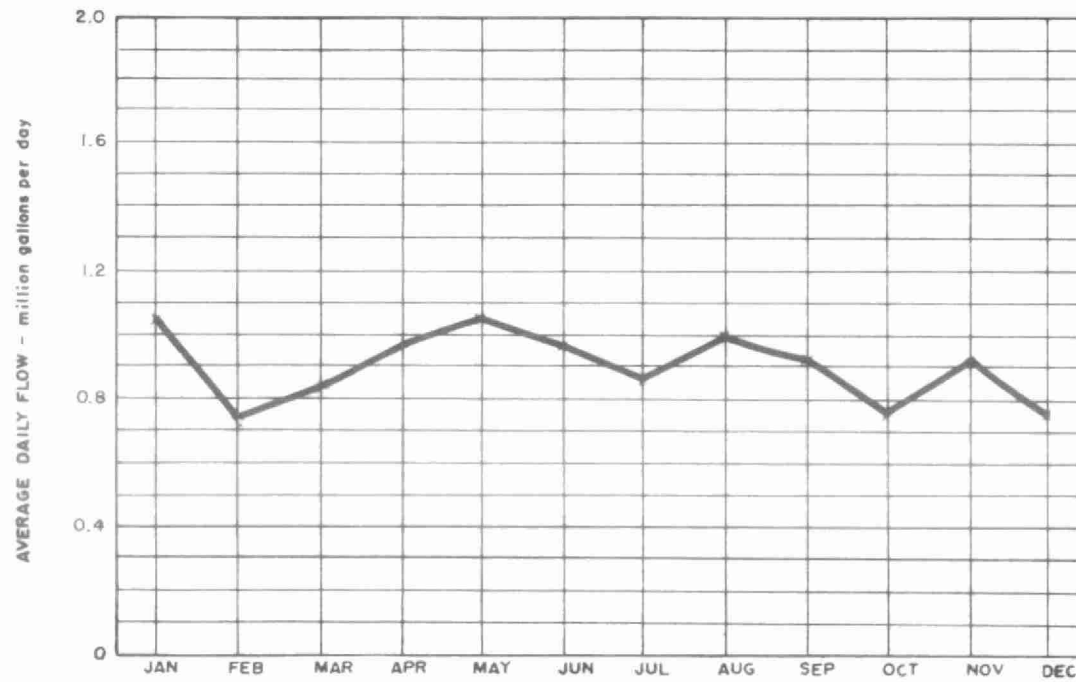
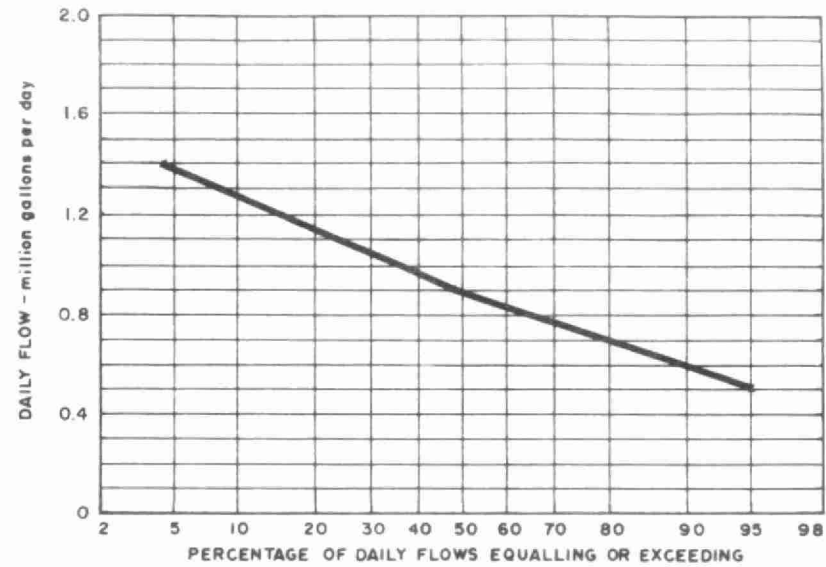
b) Secondary

Type:

Size: One 40' dia. x 23' swd

Volume: 32,000 ft.<sup>3</sup> or 0.200 M.G.

# PROCESS DATA FLOWS



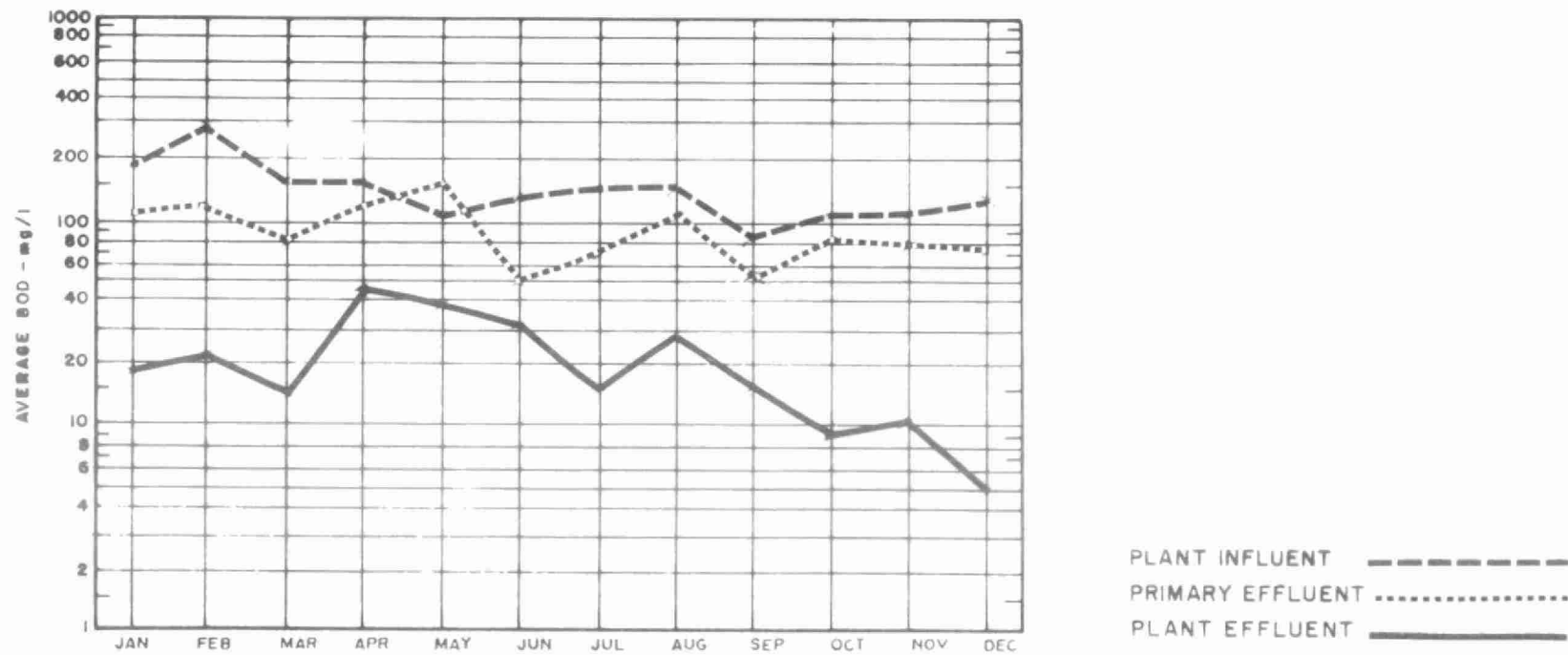
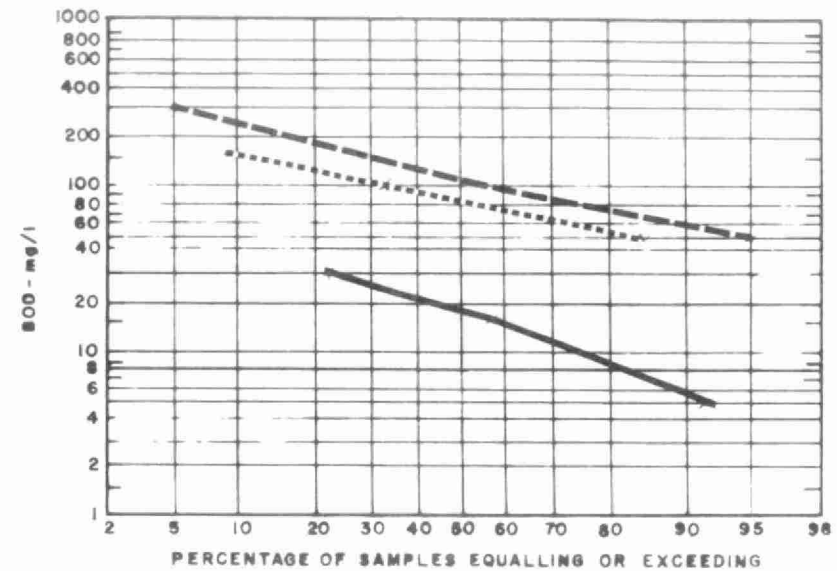
DESIGN CAPACITY \_ \_ \_ \_ \_

## PLANT PERFORMANCE

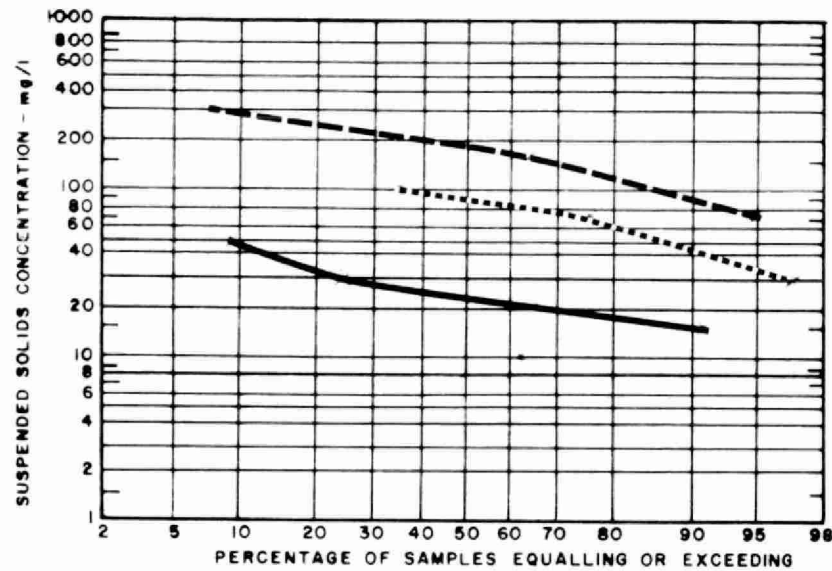
MONTH	FLOWS			BIOCHEMICAL OXYGEN DEMAND				SUSPENDED SOLIDS				PHOSPHORUS	
	TOTAL FLOW	AVERAGE DAY	MAXIMUM DAY	INFLUENT	EFFLUENT	REDUCTION		INFLUENT	EFFLUENT	REDUCTION		INFLUENT	EFFLUENT
	million gallons	mil. gal	mgd	mg/l	mg/l	%	10 <sup>3</sup> pounds	mg/l	mg/l	%	10 <sup>3</sup> pounds	mg/l P	mg/l P
JAN	32.7	1.06	1.49	190	18	91	56	505	30	94	155	7.0	1.2
FEB	20.0	.71	1.08	298	22	93	55	163	10	94	31	5.1	2.7
MAR	26.1	.84	1.44	150	14	91	36	128	10	92	31	4.9	1.3
APR	29.1	.97	1.43	149	43	71	31	86	23	73	18	4.8	2.8
MAY	32.9	1.06	1.73	101	39	61	20	135	33	76	34	4.7	2.4
JUNE	28.9	.96	2.08	140	34	76	31	133	28	79	30	4.5	2.9
JULY	26.8	.86	1.35	150	16	89	36	208	17	92	51	6.3	3.2
AUG	31.0	1.00	1.42	153	28	82	39	199	33	83	51	5.7	3.2
SEPT	27.5	.92	1.60	84	15	82	19	188	19	90	46	5.6	2.8
OCT	23.9	.77	1.02	111	9	92	24	193	34	82	38	6.1	2.6
NOV	27.7	.92	1.90	109	10	91	27	213	25	88	52	6.0	2.8
DEC	23.4	.76	1.04	143	5	97	32	217	15	93	47	5.7	2.2
TOTAL	330.0	-	-	-	-	-	413	-	-	-	531	-	-
AVG.	27.5	.90	MAXIMUM 2.08	145	20	86	34	185	24	87	44	5.5	2.7
No. of Samples	-	-	-	44	34	-	-	44	34	-	-	44	32



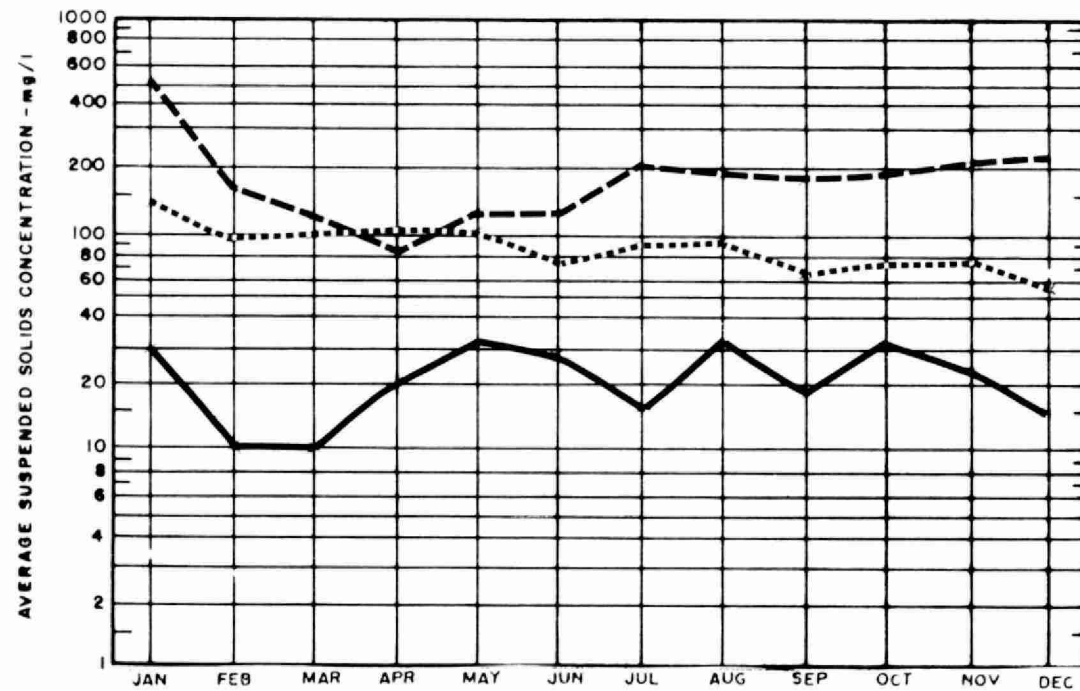
# BIOCHEMICAL OXYGEN DEMAND



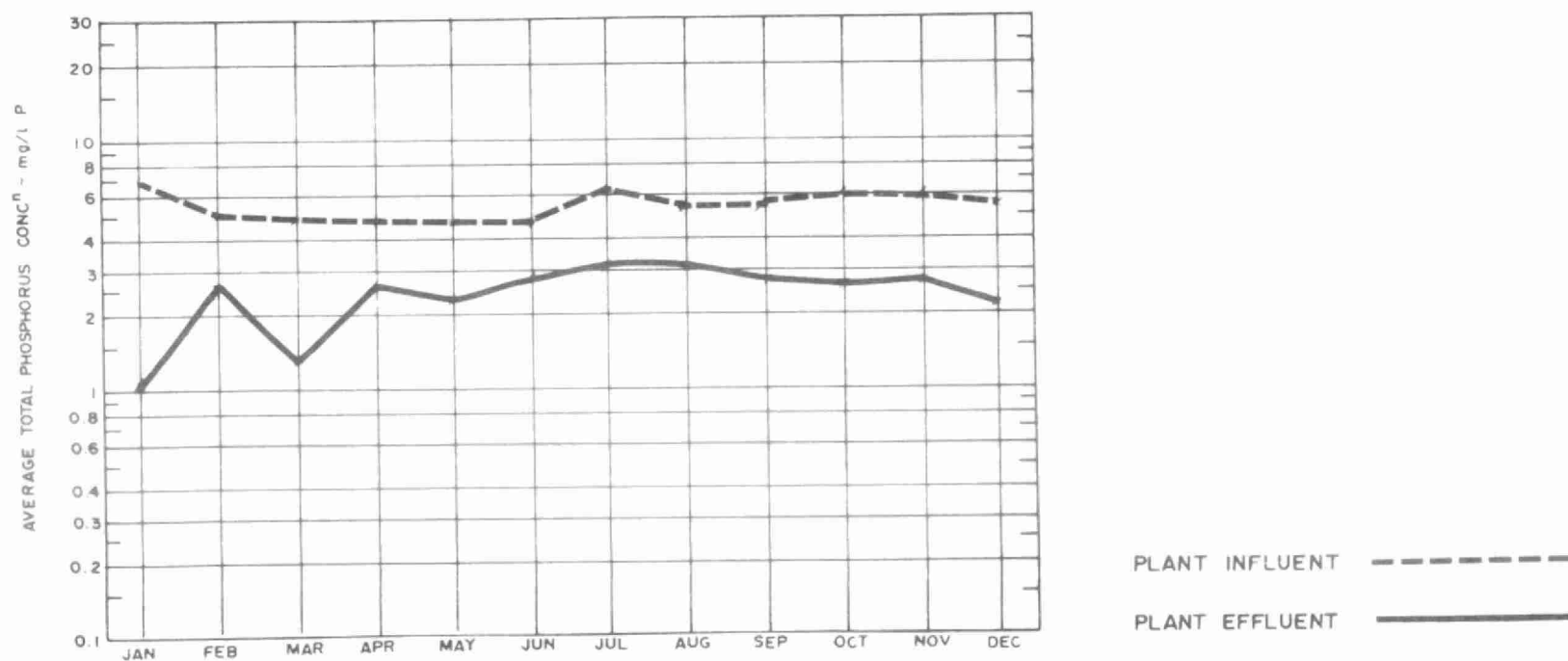
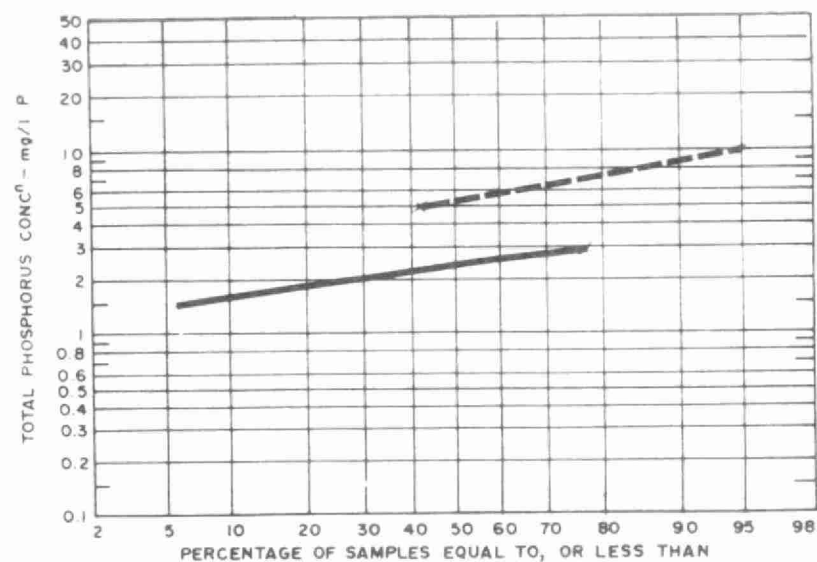
# SUSPENDED SOLIDS



PLANT INFLUENT      - - - - -  
 PRIMARY EFFLUENT      . . . . .  
 PLANT EFFLUENT      —————



# PHOSPHORUS



## TREATMENT DATA

MONTH	GRIT	CHLORINATION		PRIMARY EFFLUENT		AERATION			SLUDGE DIGESTION and DISPOSAL							
	QUANTITY REMOVED cubic feet	CL <sub>2</sub> USED 10 <sup>3</sup> pounds	AVG DOSE mg/l	BOD mg/l	SUSPENDED SOLIDS mg/l	MLSS CONC mg/l	F/M day <sup>-1</sup>	AIR 1000 ft <sup>3</sup> lb BOD	RAW SLUDGE			DIGESTED SLUDGE			SUPER- NATANT T. S. %	AMOUNT HAULED cubic yards
									QUANTITY 10 <sup>5</sup> gallons	TOTAL SOLIDS %	VOL. SOLIDS %	QUANTITY 10 <sup>5</sup> gallons	TOTAL SOLIDS %	VOL. SOLIDS %		
JAN	62	1.3	3.9	110	140	1100	.47	1.3	2.4	3.2		.79	2.9		.2	468
FEB	56	1.1	5.7	118	98	1200	.30	2.0	2.1	2.9		1.12	2.6		.1	664
MAR	62	1.2	4.6	80	100	1200	.29	2.4	2.6	2.7		.71	4.4		.1	420
APR	60	1.2	4.0	125	110	1000	.30	1.7	2.3	4.9		.76			.1	448
MAY	62	1.4	4.2	173	108	1100	.74	.9	2.6	4.3		1.32	4.5		.1	784
JUNE	60	1.3	4.4	51	75	1100	.19	8.4	2.5	5.7		.80	6.8		.1	476
JULY	62	1.0	3.8	73	94	1200	.22	2.8	2.9	2.4		1.32	4.5		.1	784
AUG	62	1.1	3.6	110	99	1200	.39	1.2	2.6	4.2		1.13	2.6		.1	672
SEPT	60	1.0	3.5	53	65	1100	.19	2.8	2.3	3.2		1.13	1.5		.08	672
OCT	54	1.0	4.3	82	78	1300	.21	1.7	2.3	1.9		1.09	1.8		.08	636
NOV	54	1.0	3.5	80	75	1100	.29	2.1	2.4	3.1		.56	1.7		.07	336
DEC	48	.8	3.3	75	57	1100	.22	2.5	1.9	2.4		1.09	3.4		.07	644
TOTAL	887	13.4	-	-	-	-	-	-	28.9	-	-	11.82	-	-	-	7004
AVG.	2.7 cu. ft/mit gal	1.1	4.1	94	92	1100	.32	2.5	2.4	3.4		.99	3.3		.1	584

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